In the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application:

1-2. (cancelled)

3. (amended) A method for compressing CT scan digital projection data, which compression allows for later reconstruction of medically useful images from compressed data, said method comprising the steps of:

assembling the CT scan digital projection data in a format suited for compression;

compressing the CT scan digital projection data with compression software into a compressed data set; and

~~The method of claim 1 further comprising the step of~~ controlling the compression by specifying [[the]] a maximum allowable error between a reconstructed pixel value and an original pixel value to be within two standard deviations of [[the]] a random noise variance.

4. (original) The method of claim 3 wherein the step of controlling the compression by specifying the maximum allowable error between a reconstructed pixel value and an original pixel value includes controlling the allowable error to be within two counts.

5. (amended) The method of claim 3 wherein the step of compressing the CT scan digital projection data includes the step of compressing the CT scan digital projection data on [[the]] an order of about 15:1.

6. (amended) The method of claim 3 wherein the step of compressing the CT scan digital projection data includes the step of compressing the CT scan digital projection data on [[the]] an order of about 12:1.

7. (amended) The method of claim 3 wherein the step of compressing the CT scan digital projection data includes the step of compressing the CT scan digital projection data on [[the]] an order of less than about 23:1.

8. (amended) The method of claim 3 wherein the step of compressing the CT scan digital projection data includes the step of compressing the CT scan digital projection data on [[the]] an order of between about 12:1 to about 15:1.

9-15. (cancelled)

16. (amended) A method for compressing CT scan digital projection data obtained using an x-ray tube and a known electrical current passing through the tube, which compression allows for later reconstruction of medically useful images from compressed data, said method comprising the steps of:

assembling the CT scan digital projection data in a format suited for compression;

compressing the CT scan digital projection data with compression software into a compressed data set; and

~~The method of claim 1 further comprising the step of~~ determining a compression ratio based in part on ~~the product of the tube mAs~~ multiplying the x-ray tube current and scanner collimation that was used in the CT scan for generating the CT scan digital projection data.

17-25. (cancelled)